

**UNITED STATES FOREST SERVICE
DESCRIPTION/SPECIFICATIONS/STATEMENT OF WORK**

PROJECT DESCRIPTION AND LOCATION

(a) - Scope of Contract. Furnish all labor, materials, equipment, supervision, and transportation necessary to complete the South Fork Sixteenmile Creek Fish Barrier work as shown and specified.

(b) - Project Location. The project is located approximately 22 miles north of Bozeman, MT, on the Gallatin National Forest. The project site location is shown on the Plans. Road access to the site is seasonally limited. Contact Bozeman Ranger District at (406) 522-2520 regarding seasonal road closure dates.

(c) – Site Access for Potential Bidders. Due to seasonal closures of portions of the access route to public use, interested bidders are encouraged to attend the Pre-bid Site Tour (see below). Contact Bozeman Ranger District at (406) 522-2520 regarding seasonal road closure dates.

The project site is accessed in the following manner: Take Hwy 86 north from Bozeman through the Bridger Mountains. Exit Hwy 86 and proceed west on Flathead Creek Road to junction with forest road #6980. Public access to Road #6980 is seasonally closed at this location (see project location map on construction plans, cover sheet). Proceed northwest on forest road #6980 to junction with forest road #6982. Proceed northeast on forest road #6982. Note: there is a seasonally locked gate on forest road #6982. Approximately 0.8 miles past the gate, road #6982 reaches the valley bottom and its junction with forest road #6982-C. From this point travel on foot approximately 0.2 miles downstream to the proposed barrier site. Note that road #6982-C is closed to motorized use by the public, including potential bidders.

(d) - Forest Service Contact. Parties with questions may contact Dale White, telephone (406) 587-6752.

(e) – Pre-bid Site Tour. There will be a pre-bid tour of the site. Tour participants will assemble at 11:00 a.m. at the intersection of MT Hwy 86 and Flathead Creek Road (near Wilsall, MT) on Tuesday May 26, 2015FWP #15-01.

GENERAL SPECIFICATIONS

(a) – Contractors Responsibilities. The Contractor shall comply with all applicable laws, ordinances, safety codes, regulations, orders and decrees. The Contractor shall be responsible for all damages to persons or property that occur as a result of the actions of the Contractor, all subcontractors, and all employees of the Contractor or subcontractors.

(b) – Structural Backfill. Backfill associated with the barrier shall be Structural Backfill as specified in Section 208 and Subsection 704.04 and furnished by the Contractor (See general notes, Sheet 2). Compaction of Structural Backfill shall comply with Subsection 208.11. Subsection 208.11 requirements include, but are not limited to, determination of optimum moisture and maximum density, adjustment of moisture content, compaction, and in-place testing of density and moisture content.

(c) – Stream Alteration Permits. The Forest Service will obtain the state and federal stream alteration permits required for the work. The Contractor shall comply with all requirements of these permits.

(d) – Traffic Control and Safety. Traffic control and site safety shall be the sole responsibility of Contractor. Adequate signs, barricades, cones, and other methods or devices shall be utilized in accordance with the MUTCD and Section 156. Road closure constraints are listed in Section 156.

(e) – Submittals. Submit manufacturer’s literature and/or material testing results for all materials used in the work in accordance with Section 153. It shall be the Contractor's responsibility to submit all items with such promptness as to cause no delay in the work. C.O.’s written approval must be obtained before starting work which involves the item. The Contractor shall allow 7 calendar days for processing of submittals by the C.O. (with the exception of the Dewatering and Sediment Control Plan submittal). The Contractor shall allow 14 calendar days for review of the Dewatering and Erosion Control Plan.

(f) - Noxious Weed Control. In order to reduce the potential spread of noxious weeds onto National Forest System lands, the contractor will be required to clean all construction equipment that may operate off existing roads prior to the equipment entering the National Forest boundary, in accordance with Section 151. The cleaning shall remove all dirt and plant parts that may carry noxious weed seeds inside the National Forest boundary.

All materials brought from off-Forest shall originate from weed-free sources in accordance with Subsection 105.02(b).

(g)– Protection of Resources. The Contractor shall confine all operations (including storage of materials) to areas authorized by the C.O., and shall not deposit rocks, excavated materials, or other debris outside of these limits. Mechanized equipment shall be operated in the creek only in areas that are completely dewatered in accordance with Section 157.

Comply with Section 107 and all Montana Department of Natural Resources & Conservation (DNRC) regulations, including Forest Fire Regulations established by the DNRC Division of Forestry.

The work locations do not coincide with any known archeological or historic sites. If a previously unidentified archeological or historic site is encountered, the Contractor shall immediately discontinue work in the general area of the site and notify the C.O.

Before beginning any work, submit a Hazardous Spill Plan in accordance with Section 107. The Contractor is solely responsible for all spills or leaks that occur during the performance of this contract. In accordance with Section 107 report, document, and clean up spills or leaks to the satisfaction of the CO and in a manner that complies with Federal, state, and local laws and regulations.

(h)– Underground Utilities. It is not known whether there are any buried utilities near the work sites. The Contractor shall contact Montana One Call at (800) 424-5555 and pay any fees required for locating and marking underground utility and water lines in the construction area. Utility location/marketing shall take place at least 2 days prior to any excavation, trenching, or other ground disturbing activity at the site. The Contractor shall be solely responsible for damage to water or utility lines resulting from his actions or those of his employees or subcontractors.

(i)– Erosion and Sediment Control. Prior to the start of construction, obtain written C.O. approval the Erosion Control Plan prepared in accordance with Section 157. Do not begin any phase of the work until the necessary controls for that particular phase of work have been implemented.

(j)– Storage and Stockpiling of Equipment and Materials. Comply with Section 105. The Contractor shall store materials at the project site only at C.O. approved locations. The Contractor shall be solely responsible for the loss of or damage to materials stored on Forest Service lands or elsewhere.

(k)– Disposal of Waste Materials. Unsuitable or excess excavated material shall be disposed of in accordance with Section 208. Trees and brush shall be disposed of in accordance with Section 201. Other project waste materials shall be removed from the Government lands and disposed of legally.

(l)– Cleanup. Maintain the project work areas in a clean and orderly condition throughout the progress of work under this contract. Upon completing the work, the Contractor shall remove from the work and premises any rubbish, tools, equipment, and materials that are not the property of the Forest Service. Upon completing the work, the Contractor shall leave the work areas in a clean, neat, and orderly condition satisfactory to the C.O.

(m)– Use of Government Facilities. The Contractor, all subcontractors, and all employees of the Contractor or subcontractors, are forbidden from camping on National Forest Lands while completing the contracted work except with written authorization from the Bozeman District Ranger. All conditions and requirements contained in such an authorization shall be met.

STANDARD SPECIFICATIONS

Materials and construction of the structure shall be in accordance with the Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects, FP-03 (U.S. customary units). These specifications can be found at <http://www.wfl.fha.dot.gov/design/specs/>.

SPECIAL PROJECT SPECIFICATIONS

The following Special Project Specifications are applicable to this contract and are physically included in this section:

<u>Number</u>	<u>Description</u>
-	Preface
101	Terms, Format, and Definitions
102	Bid, Award, and Execution of Contract
103	Scope of Work
104	Control of Work
105	Control of Material
106	Acceptance of Work
107	Legal Relations and Responsibility to the Public
108	Prosecution and Progress
109	Measurement and Payment
151	Mobilization
152	Construction Survey and Staking
153	Contractor Quality Control

155	Schedules for Construction Contracts
156	Public Traffic
157	Soil Erosion Control
201	Clearing and Grubbing
204	Excavation and Embankment
208	Structure Excavation and Backfill for Selected Major Structures
251	Riprap
258	Reinforced Concrete Retaining Walls
622	Rental Equipment
705	Rock
725	Miscellaneous Materials

DELIVERIES OR PERFORMANCE

F-2 FAR 52.211-10 Commencement, Prosecution, and Completion of Work (APR 1984) Alternate I (APR 1984)

Work at the site may not commence until Montana Fish, Wildlife & Parks has issue a Notice To Proceed.

The Contractor shall be required to (a) prosecute the work diligently, and (c) complete the entire work ready for use within sixty (60) calendar days of the Notice To Proceed. The time stated for completion shall include final cleanup of the premises.

CONTRACT ADMINISTRATION DATA

GOVERNMENT-FURNISHED PROPERTY

None

INSTRUCTIONS, CONDITIONS, AND NOTICES TO OFFERORS OR RESPONDENTS

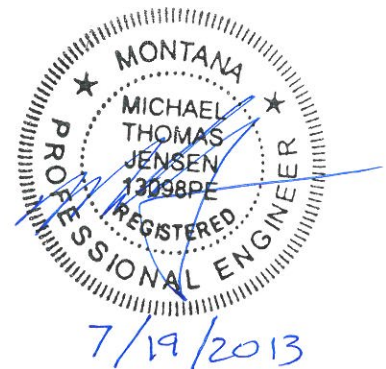
L-5 FAR 52.236-27 Site Visit (Construction) (FEB 1995)

(a) The clauses at 52.236-2, Differing Site Conditions, and 52.236-3, Site Investigations and Conditions Affecting the Work, will be included in any contract awarded as a result of this solicitation. Accordingly, offerors or quoters are urged and expected to inspect the site where the work will be performed.

SUPPLEMENTAL SPECIFICATIONS

For

SOUTH FORK SIXTEENMILE CREEK FISH BARRIER



July 2013

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Preface

Delete all but the first paragraph and add the following:

The Forest Service, US Department of Agriculture has adopted FP-03 for construction of National Forest System Roads.

101 - Terms, Format, and Definitions

101.01 Meaning of Terms

Delete all references to the TAR (Transportation Acquisition Regulations) in the specifications.

101.03 Abbreviations.

Add the following to (a) Acronyms:

AFPA	American Forest and Paper Association
MSHA	Mine Safety and Health Administration
NIST	<u>National Institute of Standards and Technology</u>
NESC	National Electrical Safety Code
WCLIB	West Coast Lumber Inspection Bureau

•
Add the following to (b) SI symbols:

mp	Milepost
ppm	Part Per Million

101.04 Definitions.

Delete the following definitions and substitute the following:

Bid Schedule--The Schedule of Items.

Bridge--No definition.

Contractor--The individual or legal entity contracting with the Government for performance of prescribed work. In a timber sale contract, the contractor is the “purchaser”.

Right-of-Way--A general term denoting (1) the privilege to pass over land in some particular line (including easement, lease, permit, or license to occupy, use, or traverse public or private lands), or (2) Real property necessary for the project, including roadway, buffer areas, access, and drainage areas.

Add the following:

Adjustment in Contract Price--“Equitable adjustment,” as used in the Federal Acquisition Regulations, or “construction cost adjustment,” as used in the Timber Sale Contract, as applicable.

Change--“Change” means “change order” as used in the Federal Acquisition Regulations, or “design change” as used in the Timber Sale Contract.

Design Quantity--“Design quantity” is a Forest Service method of measurement from the FS-96 *Forest Service Specifications for the Construction of Roads and Bridges*. Under these FP specifications this term is replaced by the term “Contract Quantity”.

Equivalent Diameter—The equivalent diameter is herein defined as the “b-axis” measurement of a rock where: the “a-axis” is the longest dimension of the rock; the “b-axis” is the middle dimension; and the “c-axis” is the shortest dimension. For example: for a rock with length 12 inches, width 10 inches, and height 8 inches the “b-axis” measurement is 10 inches, which would be the *equivalent diameter* of the rock.

Forest Service--The United States of America, acting through the Forest Service, U.S. Department of Agriculture.

Neat Line--A line defining the proposed or specified limits of an excavation or structure.

Pioneer Road--Temporary construction access built along the route of the project.

Purchaser--The individual, partnership, joint venture, or corporation contracting with the Government under the terms of a Timber Sale Contract and acting independently or through agents, employees, or subcontractors.

Protected Streamcourse--A drainage shown on the plans or timber sale area map that requires designated mitigation measures.

Road Order--An order affecting and controlling traffic on roads under Forest Service jurisdiction. Road Orders are issued by a designated Forest Officer under the authorities of 36 CFR, part 260.

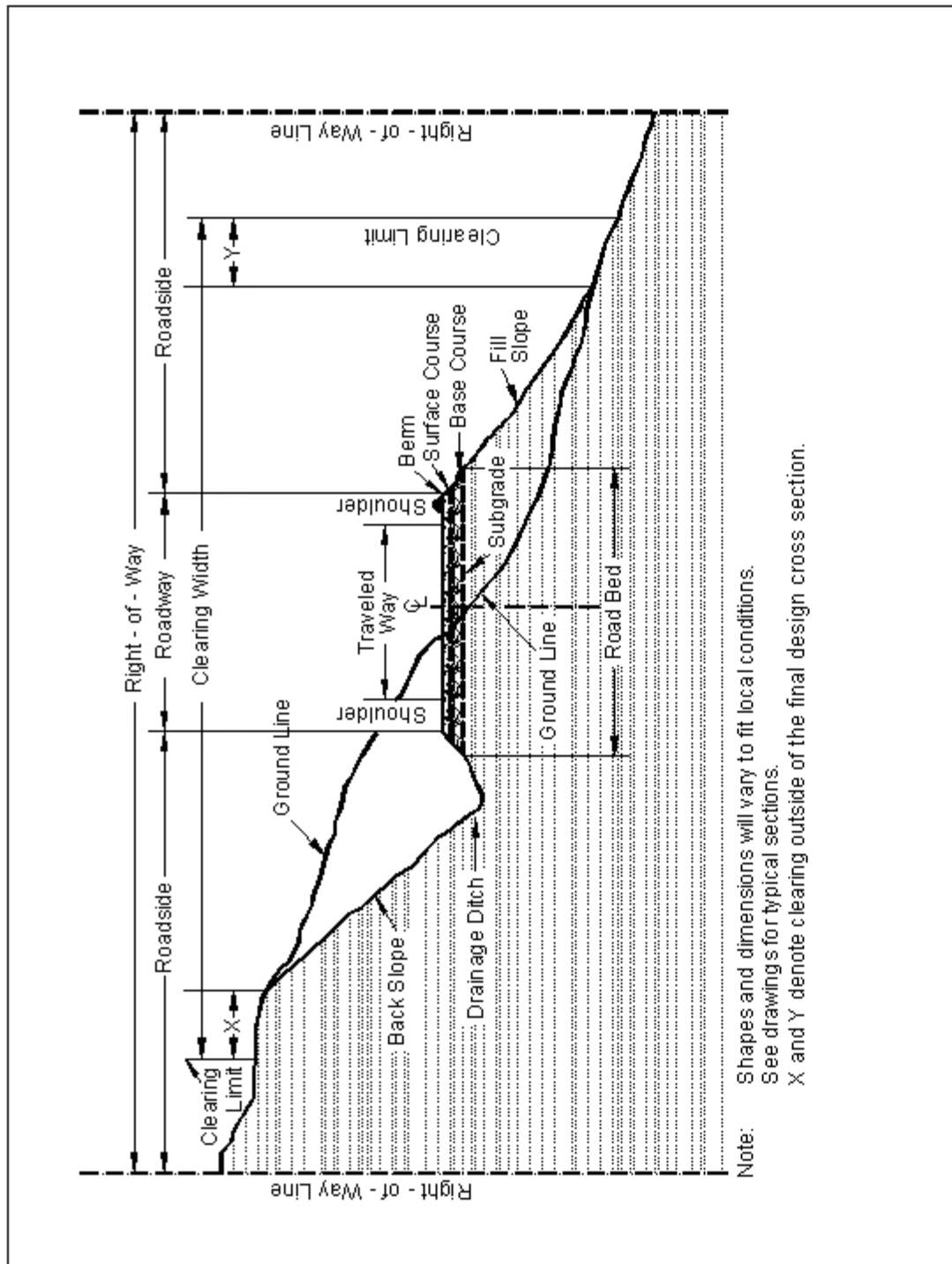
Schedule of Items--A schedule in the contract that contains a listing and description of construction items, quantities, units of measure, unit price, and amount.

Thalweg—The lowest elevation point in a channel cross-section.

Utilization Standards--The minimum size and percent soundness of trees described in the specifications to determine merchantable timber.

Add Figure 101-1—Illustration of road structure terms:

Figure 101-1—Illustration of road structure terms.



102 - Bid, Award, and Execution of Contract

102 Bid, Award, and Execution of Contract

Delete Section 102 in its entirety.

103 - Scope of Work

Deletions

Delete all but subsection 103.01 Intent of Contract.

104 - Control of Work**Deletions**

Delete Sections 104.01, 104.02, and 104.04.

Add the following subsection:

104.06 Use of Roads by Contractor . The Contractor is authorized to use roads under the jurisdiction of the Forest Service for all activities necessary to complete this contract, subject to the limitations and authorizations designated in the Road Order(s) or described in the contract, when such use will not damage the roads or national forest resources, and when traffic can be accommodated safely.

Add Subsection.

104.07 Other Contracts.

There are no other major construction projects anticipated in this project vicinity during 2013-2014.

105 - Control of Material**105.02 Material Sources, (a) Government-provided sources.**

Add the following before the first paragraph.

There are no Government-provided material sources for this project.

105.02 Material Sources, (b) Contractor-located sources

Add the following:

All rock, gravel, sand, soil, and backfill/embankment materials that are not obtained from excavation carried out in the course of performing the work, or from government-provided sources as identified in Part 105.02(a), shall be imported from non-Government Lands. Such materials shall be from one of the following:

- A. A source certified to be weed free by the county or state. Provide proof of weed-free certification.
- B. A source approved by the C.O. A source will not be approved by the C.O. if there are noxious weed species present at or adjacent to the source area.

Notify the C.O. of intended material sources at least 2 weeks prior to planned material haul date. Provide for access to material source site for inspection purposes.

105.05 Use of Material Found in the Work.

Delete 105.05 (a) and (b) and the last sentence of the second paragraph and substitute the following:

Materials produced or processed from Government lands in excess of the quantities required for performance of this contract are the property of the Government. The Government is not obligated to make reimbursement for the cost of producing these materials.

106 - Acceptance of Work

106.07 Delete

Delete subsection 106.07.

107 - Legal Relations and Responsibility to the Public**107.05 Responsibility for Damage Claims.**

Delete the entire subsection.

107.06 Contractor's Responsibility for Work.

Delete the following from the first paragraph.

“except as provided in Subsection 106.07”.

107.09 Legal Relationship of the Parties.

Delete the entire subsection.

107.10 Environmental Protection.

Add the following:

Design and locate equipment repair shops, stationary refueling sites, or other facilities to minimize the potential and impacts of hazardous material spills on Government land.

Before beginning any work, submit a Hazardous Spill Plan. List actions to be taken in the event of a spill. Incorporate preventive measures to be taken, such as the location of mobile refueling facilities, storage and handling of hazardous materials, and similar information. Immediately notify the CO of all hazardous material spills. Provide a written narrative report form no later than 24 hours after the initial report and include the following:

- Description of the item spilled (including identity, quantity, manifest number, and other identifying information).
- Whether amount spilled is EPA or state reportable, and if so whether it was reported, and to whom.
- Exact time and location of spill including a description of the area involved.
- Containment procedures.
- Summary of any communications the Contractor had with news media, Federal, state and local regulatory agencies and officials, or Forest Service officials.
- Description of clean-up procedures employed or to be employed at the site including final disposition and disposal location of spill residue.

When available provide copies of all spill related clean up and closure documentation and correspondence from regulatory agencies.

The Contractor is solely responsible for all spills or leaks that occur during the performance of this contract. Clean up spills or leaks to the satisfaction of the CO and in a manner that complies with Federal, state, and local laws and regulations.

108 - Prosecution and Progress

108 Delete.

Delete Section 108 in its entirety.

109 - Measurement and Payment

Delete the following entire subsections:

109.06 Pricing of Adjustments.

109.07 Eliminated Work.

109.08 Progress Payments.

109.09 Final Payment.

109.02 Measurement Terms and Definitions.

(b) Contract quantity.

Add the following:

Contract quantities will be adjusted only when there are errors in the original design of 15% or more.

Change the following:

“(b) Cubic yard” to “(c) Cubic yard”.

Add the following definition:

(p) Thousand Board Feet (Mbf). 1,000 board feet based on nominal widths, thickness, and extreme usable length of each piece of lumber or timber actually incorporated in the job. For glued laminated timber, 1,000 board feet based on actual width, thickness, and length of each piece actually incorporated in the job.

151 - Mobilization

Delete Section 151 in its entirety and replace with the following.

Description

151.01. This work consists of moving personnel, equipment, material, and incidentals to the project and performing all work necessary before beginning work at the project site; obtaining of permits, insurance, and bonds. This work also includes washing and treating construction equipment and vehicles necessary for equipment transport to remove seeds, plants, and plant fragments before the equipment is used on Forest Service lands, according to the requirements within.

Construction Requirements

151.02. Wash the sides, tops, and undercarriages of all construction equipment. Remove all seeds, plants, plant fragments, dirt, mud, and debris from the construction equipment. Only equipment inspected by the Forest Service will be allowed to operate within the project area. All subsequent move-ins of equipment to the project area will be treated in the same manner as the initial move-in. This requirement does not apply to cars, pickup trucks, and other vehicles that regularly travel between the construction site and areas off the National Forest.

Equipment will be considered free of soil, seed, and other such debris when a visual inspection by the CO does not disclose such material. Disassembly of equipment, components or the need for specialized inspection tools is not required.

Notify the CO in writing at least 72 hours before moving any construction equipment onto the national forest. Notification will include an agreed upon location where the equipment will be available for inspection by the Forest Service. Inspection will be required after every cleaning.

Measurement

151.02. Clean equipment prior to moving onto this project. Subsequent cleanings necessitated by the Contractor's actions but not directed by the CO will not be included in the measurement for payment.

Measure mobilization according to Subsection 109.02.

Payment

151.03. The accepted quantity, measured as provided in Subsection 109.02, will be paid at the contract price per unit of measurement for the Section 151 pay item shown in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

Include all costs associated with the initial cleaning of equipment in the unit bid price for Mobilization. Cleaning for subsequent move-ins will not be paid for unless after a suspension ordered by the CO.

152 - Construction Survey and Staking

Add the following:

Conduct all construction staking under the direction of a licensed professional engineer or land surveyor who is closely associated and familiar with construction staking.

153 – Contractor Quality ControlAdd the following.**153.07. Project Submittals**

At a minimum the contractor shall provide project submittals as shown on the below Submittal Log. Submittal requirements are listed in the Standard Specifications, Supplemental Specifications, and Plans.

Submittal Log					
Log No.	Incidental to Pay Item(s)	Description of Submittal	Type of Submittal	Requirement found in Specification No. /Drawings	Additional Specification References
1	151-01	Weed Free Material Source Certification	Material Certification	FSSS 105.02(b)	
2	151-01	Hazardous Spill Plan	Plan	FSSS 107.10	
3	151-01	Contractor Quality Control Plan	Plan	153.02	552.09
4	151-01	Traffic Control Plan	Plan	FSSS 156.03	
5	157-13	Soil Erosion and Pollution Control Plan	Plan	FSSS 157.03	
6	208-01	Excavation Plan	Plan	Drawing Sheet 2	
7	209-50	Bedding Gradation	Gradation	209	Sec 704
8	251-01A 251-01B 251-59	Riprap	Material Certification	251, FSSS 251	705, Drawings
9	251-59	Grout: Mix Design	Mix Design	251, 725	
10	258-01	Structural Concrete: Mix Design	Mix Design	258, FSSS 258, 552, Drawings	
11	258-01	Structural Concrete: Testing	Test Results	258, FSSS 258, 552, Drawings	
12	622-01	Equipment Rental	Equipment Approval	FSSS 622	

155 - Schedules for Construction Contracts

155 Delete.

Delete Section 155 in its entirety.

156 - Public Traffic**156.03 Accommodating Traffic During Work.**

Delete the first paragraph and replace with the following:

Accommodate traffic according to the requirements set forth below, MUTCD, and Section 635. Submit a traffic control plan for acceptance at least 30 days before intended use.

Add the following project specific requirements:

It is the responsibility of the Contractor to schedule delivery of materials, equipment and all necessary supplies to the site, to ensure that the work can be completed within the specified contract time.

The Contractor will be allowed to use Roads 6980, 6982, and 6982C during the construction period. During the seasonal closure period the Contractor shall maintain road 6982 as closed to public use at the appropriate location. The Contractor shall maintain Road 6982C closed to public use at all times. The Contractor shall be responsible for providing, installing, maintaining, and removal of warning signs and barricades required for road closure in accordance with MUTCD as submitted and approved in the traffic control plan. Notify C.O. in writing a minimum of 2 calendar weeks prior to proposed road use period.

Delete the following from the last sentence of the last paragraph:

according to Subsection 106.07(b)

156.08 Traffic and Safety Supervisor.

Delete this subsection in its entirety.

157 - Soil Erosion Control

157.02 Materials

Add the following:

Provide bales, wattles, logs, rolls, and all other erosion control materials from a certified noxious weed free source.

157.03 General.

Delete the first two paragraphs and replace with the following:

Submit a written Dewatering and Erosion Control Plan detailing permanent and temporary control measures to re-route streamflow, dewater excavations, and minimize erosion and sedimentation during and after construction in accordance with contract requirements and permits. Do not modify the type, size, or location of any control or practice without approval. Submit the proposed Dewatering and Erosion Control Plan at least 14 days before operations begin to the CO for approval. Obtain written C.O. approval of the erosion control plan prior to beginning work. Do not begin any phase of the work until the necessary erosion controls for that phase of work are in place.

Reflect in the Dewatering and Erosion Control Plan special concerns and measures necessary to protect resources and government improvements. Include:

- (a) The construction activities and sequence of implementation relating to specific erosion control measures.
- (b) The location and type of permanent controls to be implemented during construction.
- (c) The location and type of temporary controls to be implemented during construction.
- (d) For work in stream channels with running water a detailed dewatering plan.
- (e) For work in stream channels without flowing water describe level of ground and vegetative disturbance and measures to reduce potential sediment delivery.
- (f) Description of the monitoring plan.

Add the following to the third paragraph:

Upon completion of construction at the site, remove all temporary erosion control devices, dewatering materials and equipment from Government property.

Add the following text after the third paragraph:

Dewater all excavations and other wet areas to allow construction to fully meet contract requirements including (but not limited to) requirements associated with foundation/subgrade preparation; placement and compaction of bedding; backfill placement and compaction and; reinforced concrete construction. Implement all measures and precautions necessary to ensure the safety of workers and the protection of the work, including maintenance of integrity against rupture and/or heave of the bottom of the excavation and collapse of excavation walls. Release water that has been removed from excavations and other wet areas in a manner that does not introduce sediment or other debris/materials to any natural stream or wetland.

157.08 Water Crossings.

Add the following:

At any channel crossing where there is running water, dewater by rerouting water flow around the site before and during excavation and embankment operations. Divert, convey, and release stream flow without introducing sediment or other debris/materials to the water.

157.15 Measurement

Delete all text except for the first paragraph.

157.16 Payment.

Delete entire Subsection and replace with the following:

The accepted quantities will be paid at the contract price per unit of measurement for the Section 157 pay items listed in the bid schedule. Payment will be full compensation for the work prescribed in this Section. See Subsection 109.05.

201 - Clearing and Grubbing

201.01 Description

Replace with the following

This work consists of clearing and grubbing within clearing limits and other designated areas.

201.02 Material

Delete Tree wound dressing material reference.

201.03 General.

Delete the last sentence.

201.04 Clearing.

Add the following:

Secure C.O. approval prior to felling trees with diameter 8-inches or greater.

Delete the last sentence of (d).

Add the following:

When marked in advance, remove dead trees over 6 inches in diameter measured at 12 inches above the ground that lean toward the road and are tall enough to reach the roadbed. Remove CO-identified trees which have sustained significant root damage as a result of construction activities.

201.06 Disposal

Delete first two sentences.

Add the following.

Dispose of clearing and grubbing materials by spreading over the final ground surface of disturbed areas and rehabilitated temporary access road as directed by the C.O. No clearing and grubbing material shall be disposed of within the inundation area.

204 - Excavation and Embankment

204.11 Compaction.

Delete section and add the following:

Layer Placement Method. Surfaces steeper than 3 horizontal to 1 vertical upon which embankment is to be placed shall be roughened or stepped. Embankment shall be layer placed. Place material to the minimum depth needed for operation of spreading equipment, and in layers no more than 12 inches thick. Material shall be at a moisture content suitable to obtain a mass that will not visibly deflect under the load of the hauling and spreading equipment. Operate hauling and spreading equipment over the full width of each layer until visible deformation of the layer ceases.

204.14 Disposal of Unsuitable or Excess Material.

Delete the text of the first paragraph and substitute the following:

Dispose of unsuitable or excess material at designated site(s) approved by the CO. Designated site(s) will be upstream of the barrier within the inundation area.

208 - Structure Excavation and Backfill for Selected Major Structures**208.02 Material**

Add the following:

Bedding Material 704.02

208.04 General.

In paragraph 7, delete the following:

“Dispose of unsuitable or excess material according to Subsection 204.14”

And replace with the following text:

Excavated material (spoils) resulting from Structure Excavation shall be disposed of by using it as fill in Wetland Bench construction. Haul, place, shape and compact material in accordance with Wetland Bench construction requirements shown on Sheets 2 and 6. Place material in lifts not exceeding 1 foot in thickness and compact by operating spreading/shaping equipment uniformly over the surface prior to placing the next lift. Disposal of excess material resulting from Structure Excavation is included in Pay Item 208-01.

208.09 Foundation Preparation

Add the following:

(g) **Bedding.** Place bedding in accordance with Subsection 209.09(a)

208.10 Backfill.

Delete 1st sentence and replace with the following:

Backfill with material meeting requirements under Subsection 704.04 – Structural Backfill

208.11 Compacting.

Add the following:

Bedding compaction: Compact bedding in accordance with Subsection 208.11.

208.12 Acceptance.

Delete reference to Table 208-1:

Delete Table 208-1:

208.13 Measurement

Delete the following sentence:

“Measure foundation fill and structural backfill by the cubic yard in place for the volume placed inside vertical planes located 18 inches outside and parallel to the limits of the footings or foundations.”

Insert the following text:

Measure structural backfill by the cubic yard in place.

Measure foundation fill by the cubic yard in place for the volume placed inside vertical planes located 18 inches outside and parallel to the limits of the footings, foundation, or slab.

251 - Riprap**251.01 Description**

Delete the first sentence and add the following:

This work consists of furnishing, hauling, and placing of riprap for bank protection, slope protection, drainage structures, erosion control, and other features shown on the plans.

251.02 Materials

Delete the following row from table:

Cement grout	725.22(e)
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Insert the following rows to table:

Cement grout	725.22(g)
Class G Riprap	705.02

251.03 General.

Add the following:

Fill voids in placed riprap as directed on the Plans. Use vibration or water to settle finer sediments into riprap to fill all voids completely.

251.06 Grouted Riprap.

Add the following after the second paragraph:

During grout placement, use a vibrator to ensure grout completely fills all voids.

251.07 Acceptance

Delete the fourth sentence and add the following:

Structure excavation and backfill will be evaluated under section 208.

258 – Reinforced Concrete Retaining Walls

258.03 General.

Delete the second sentence of the first paragraph

258.04 Reinforcing Steel.

Delete the first sentence of the first paragraph

258.05 Reinforcing Steel.

Replace the first sentence of the first paragraph with the following:

“Design concrete mixture according to Structural Notes on the Drawings and Subsection 552.03.”

622 - Rental Equipment**622.02 Rental Equipment.**

Delete the first two sentences of the first paragraph and add the following:

Provide the following equipment:

Excavator: steel tracked, minimum 115 horsepower, with minimum 1.5 cubic yard bucket and hydraulic thumb.

Provide equipment of at least the minimum size needed to efficiently perform the work. Submit the model number of the equipment to the CO for approval before delivery to the project site. Equipment shall be no more than 15 years old and shall be reasonably free of leaks and other mechanical deficiencies.

705 - Rock**705.02 Riprap Rock.**

Add the following:

(e) The gradation for Class G Riprap rock shall be as follows:

Class	Percent of Rock by Mass	Mass (pounds)	Approximate Cubic Dimension (inches)
G	20	550 to 770	18 to 20
	30	220 to 550	14 to 18
	50	22 to 220	6 to 14

725 – Miscellaneous Materials**725.22 Grout**

Add the following:

(g) Grout for Class G Grouted Riprap

Submit a grout mix design that readily flows into the open spaces between the stones with the riprap gradation used.

Provide grout that meets the following requirements:

1. Minimum 28-day compressive strength of 3000 psi
2. Minimum air content of 5 percent.
3. Minimum of six sacks of Type II portland cement per cubic yard of grout.
4. Nominal maximum aggregate size: ½ inch

Grout components and admixtures shall conform with requirements of Section 552.

Furnish, place, and cure grout in conformance with Section 552.